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INTERNATIONAL ORGANIZATION FOR STANDARDIZATION•МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ•ORGANISATION INTERNATIONALE DE NORMALISATION

Sodium hexafluorosilicate for industrial use — Determination of loss in mass at 105 °C

Hexafluorosilicate de sodium à usage industriel — Détermination de la perte de masse à 105 °C

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FOREWORD

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (ISO member bodies). The work of developing International Standards is carried out through ISO technical committees. Every member body interested in a subject for which a technical committee has been set up has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council.

International Standard ISO 5444 was developed by Technical Committee ISO/TC 47, *Chemistry*, and was circulated to the member bodies in July 1976.

It has been approved by the member bodies of the following countries :

Belgium	Israel	South Africa, Rep. of
Brazil	Italy	Spain
Chile	Korea, Rep. of	Switzerland
Czechoslovakia	Mexico	Thailand
France	Netherlands	Turkey
Germany, F.R.	Philippines	United Kingdom
Hungary	Poland	U.S.S.R.
India	Romania	Yugoslavia

No member body expressed disapproval of the document.

This International Standard has also been approved by the International Union of Pure and Applied Chemistry (IUPAC).

Printed in Switzerland

Sodium hexafluorosilicate for industrial use — Determination of loss in mass at 105 °C

WARNING — Sodium hexafluorosilicate is poisonous if taken internally. Breathing of the dust should be avoided. Contact with eyes and skin should be prevented and operators should wash thoroughly after handling the material and should wear a respirator and goggles when handling the powdered material.

1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies a gravimetric method for the determination of the loss in mass at 105 °C of sodium hexafluorosilicate for industrial use.

The method is applicable to the determination of losses in mass at 105 °C equal to or greater than 0,008 % (*m/m*).

2 PRINCIPLE

Drying of a test portion at 105 °C for 6 h and determination of the loss in mass.

3 APPARATUS

Ordinary laboratory apparatus and

3.1 Electric oven, capable of being controlled at 105 ± 1 °C.

3.2 Glass weighing bottle, of height approximately 30 mm and diameter approximately 60 mm.

4 PROCEDURE

Remove the stopper from the weighing bottle (3.2) and dry both components in the oven (3.1), controlled at 105 ± 1 °C, for 1 h. Allow the weighing bottle and stopper to cool in a desiccator, fit the stopper and weigh to the nearest 0,001 g.

Weigh, to the nearest 0,001 g, about 50 g of the laboratory sample into the weighing bottle. Place the weighing bottle and contents, the stopper and a watch-glass, the diameter of which is slightly larger than that of the weighing bottle, in the oven (3.1), controlled at 105 ± 1 °C, for 6 h. After drying, place the watch-glass over the top of the weighing bottle, place this assembly and the stopper in a desiccator and allow to cool. Close the weighing bottle with its stopper and weigh to the nearest 0,001 g.

NOTE — Retain the dried test portion for the other determinations on sodium hexafluorosilicate (see the annex).

5 EXPRESSION OF RESULTS

The loss in mass at 105 °C, expressed as a percentage by mass, is given by the formula

$$\frac{m_1 - m_2}{m_1 - m_0} \times 100$$

where

m_0 is the mass, in grams, of the dried weighing bottle, with stopper;

m_1 is the mass, in grams, of the weighing bottle, stopper and test portion, before drying;

m_2 is the mass, in grams, of the weighing bottle, stopper and test portion, after drying.

6 TEST REPORT

The test report shall include the following particulars :

a) an identification of the sample;

b) the reference of the method used;

c) the results and the method of expression used;

d) any unusual features noted during the determination;

e) any operation not included in this International Standard, or regarded as optional.

ANNEX

ISO PUBLICATIONS RELATING TO SODIUM HEXAFLUOROSILICATE FOR INDUSTRIAL USE

ISO 4281 — Free acidity and sodium hexafluorosilicate content.

ISO 5440 — Determination of phosphate content — Molybdovanadate spectrophotometric method.

ISO 5443 — Determination of iron content — 1,10-Phenanthroline spectrophotometric method.

ISO 5444 — Determination of loss in mass at 105 °C.

ISO 5915 — Determination of particle size distribution — Sieving method.

ISO 6229 — Determination of free silica content — Gravimetric method.